

Erbia Can Tipper/Rotator Control - With Simulation

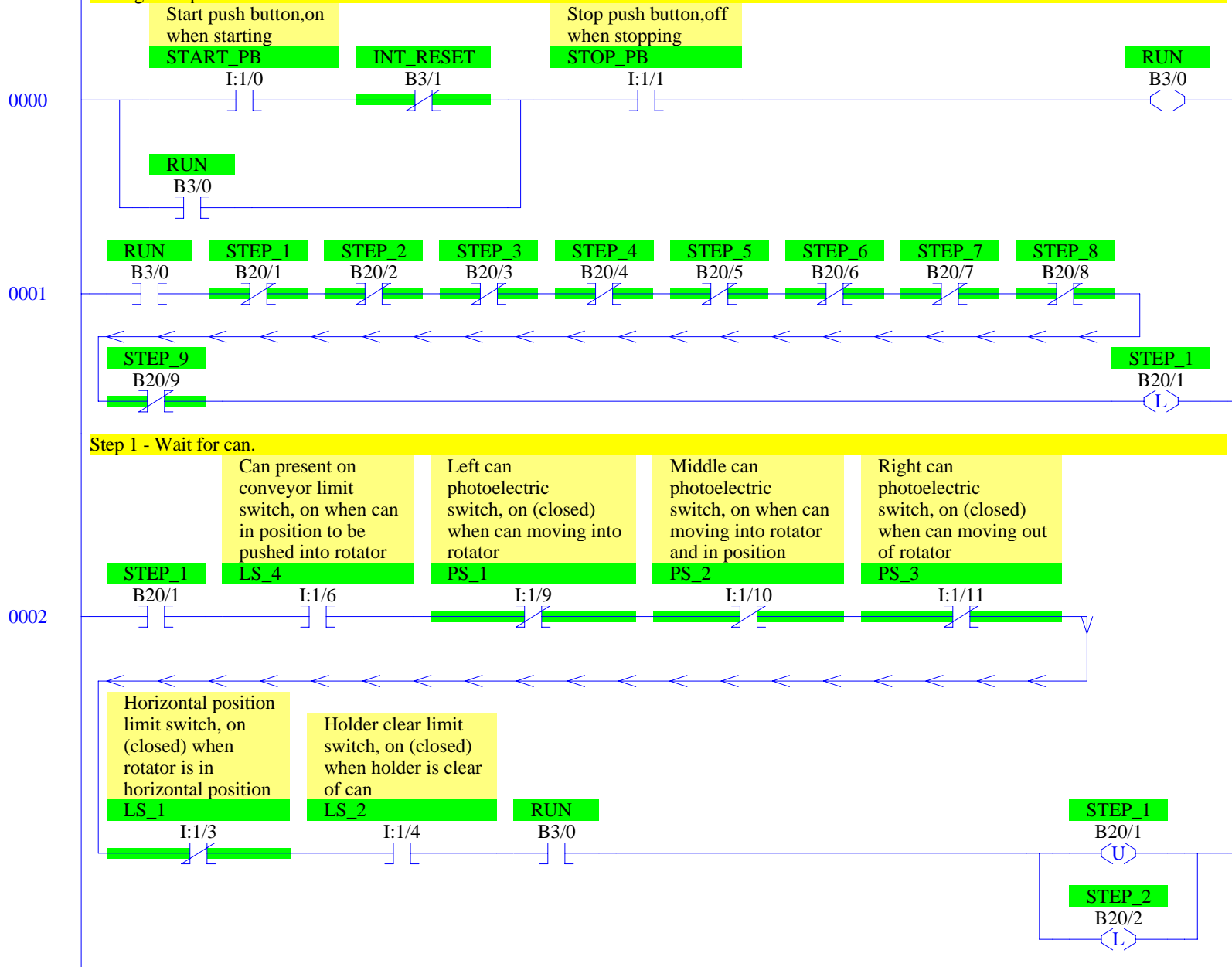
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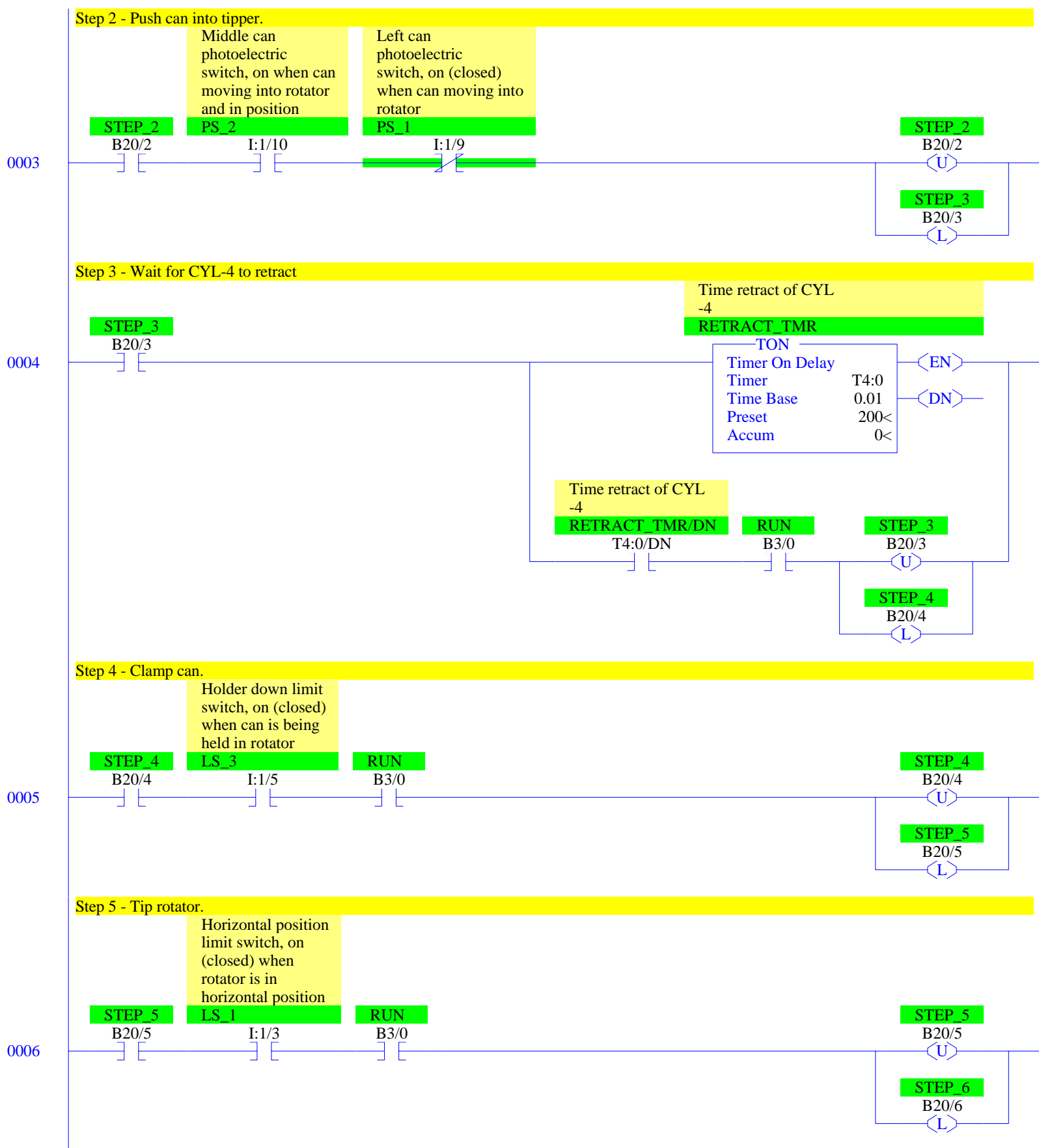
Additional internal memory:

Symbol	Address	
RUN	B3/0	On while station running
INT_RESET	B3/1	Internal reset
STEP_1 to STEP_9	B20/1 to B20/9	Step-in-progress bits
RETRACT_TMR	T4:0	Times retract of CYL-4
BLEND_TMR	T4:1	Times rotation for blend

Start/stop and initial start.

During reset prevent start.





0007

Step 6 - Blend.

Blend timer, 60
sec

STEP_6

B20/6

RUN

B3/0

BLEND_TMR

RTO
Retentive Timer On
Timer T4:1
Time Base 1.0
Preset 60<
Accum 0<

EN

DN

Blend timer, 60
sec

BLEND_TMR/DN

T4:1/DN

STEP_6

B20/6

U

STEP_7

B20/7

L

Blend timer, 60
sec

BLEND_TMR

T4:1

RES

0008

Step 7 - Untip.

Vertical position
limit switch, on
(closed) when
rotator in vertical
position

STEP_7

B20/7

LS_5

I:1/7

RUN

B3/0

STEP_7

B20/7

U

STEP_8

B20/8

L

0009

Step 8 - Unclamp.

Holder clear limit
switch, on (closed)
when holder is clear
of can

STEP_8

B20/8

LS_2

I:1/4

RUN

B3/0

STEP_8

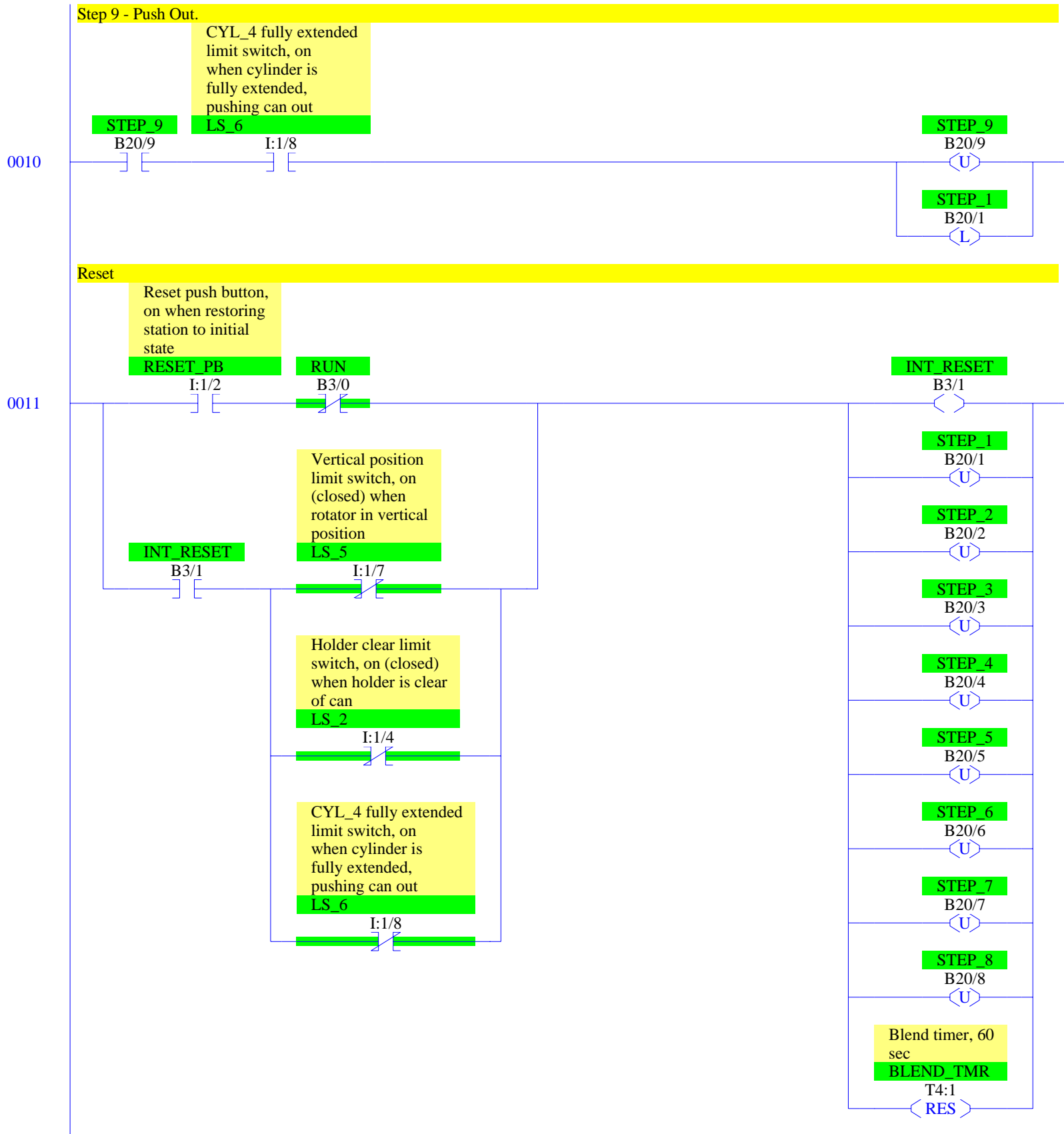
B20/8

U

STEP_9

B20/9

L



Physical Outputs

Can not turn off CYL_1, CYL_2, or CYL_3 when paused.
On reset, do not unclamp until in vertical position.

Can holder cylinder
control, on to clamp
can into rotator

CYL_1

O:2/0



STEP_4

B20/4

STEP_5

B20/5

STEP_6

B20/6

STEP_7

B20/7

INT_RESET

B3/1

Vertical position
limit switch, on
(closed) when
rotator in vertical
position

LS_5

I:1/7



Tipper cylinder
control, on to tip
rotator

CYL_2

O:2/1



STEP_5

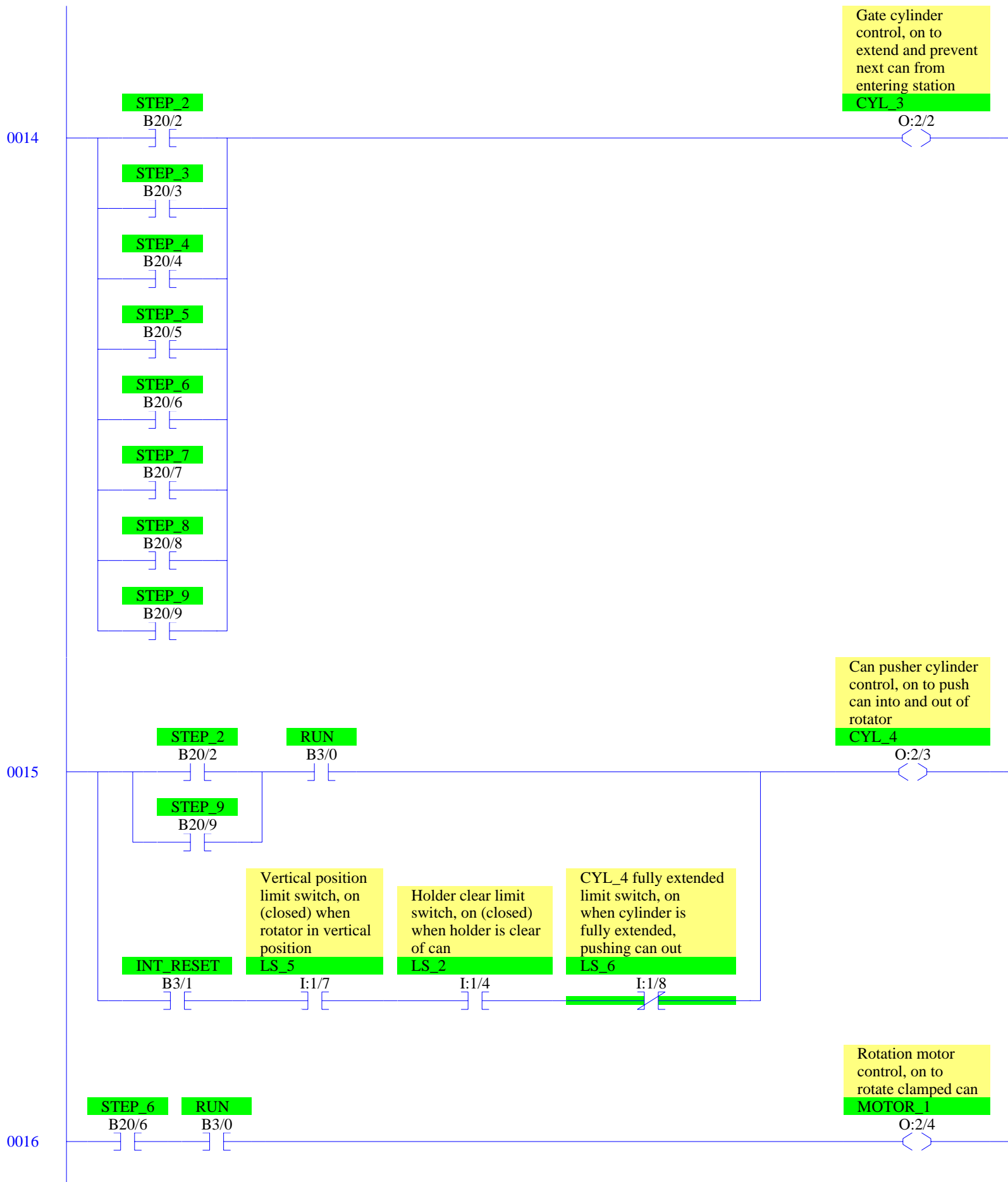
B20/5

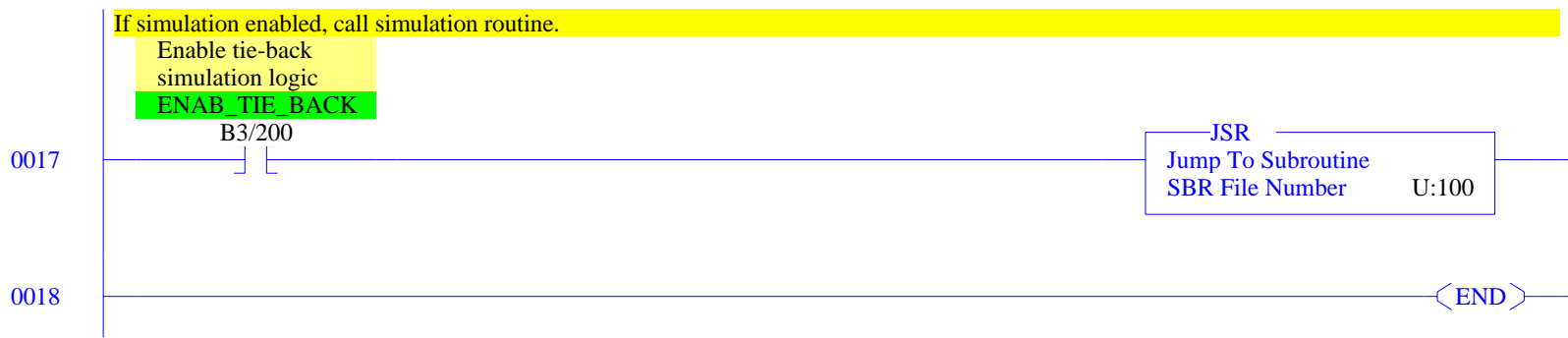
STEP_6

B20/6

0012

0013





Simulation of erbia can tipper/rotator

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Horizontal/vertical limit switch simulation: Turn on LS_1 when CYL_2 on for 3 secs. Turn on LS_5 when CYL_2 off for 3 secs.

Tipper cylinder
control, on to tip
rotator

CYL_2

O:2/1

TIE_TMR_0

TON

Timer On Delay

Timer

T200:0

Time Base

0.01

Preset

300<

Accum

0<

EN

DN

Horizontal position
limit switch, on
(closed) when
rotator is in
horizontal position

TIE_TMR_0/DN

T200:0/DN

LS_1

I:1/3

Tipper cylinder
control, on to tip
rotator

CYL_2

O:2/1

TIE_TMR_1

TON

Timer On Delay

Timer

T200:1

Time Base

0.01

Preset

300<

Accum

300<

EN

DN

Vertical position
limit switch, on
(closed) when
rotator in vertical
position

TIE_TMR_1/DN

T200:1/DN

LS_5

I:1/7

Tieback for clamped can limit switches

Clamped can limit switch simulation: Turn on LS_3 when CYL_1 on for 3 secs. Turn on LS_2 when CYL_1 off for 3 secs.

Can holder cylinder
control, on to clamp
can into rotator

CYL_1

O:2/0

TIE_TMR_2

TON

Timer On Delay

Timer T200:2

Time Base 0.01

Preset 300<

Accum 0<

EN

DN

Holder down limit
switch, on (closed)
when can is being
held in rotator

TIE_TMR_2/DN

T200:2/DN

LS_3

I:1/5

Can holder cylinder
control, on to clamp
can into rotator

CYL_1

O:2/0

TIE_TMR_3

TON

Timer On Delay

Timer T200:3

Time Base 0.01

Preset 300<

Accum 300<

EN

DN

Holder clear limit
switch, on (closed)
when holder is clear
of can

TIE_TMR_3/DN

T200:3/DN

LS_2

I:1/4

Switches that change because of CYL_4 extension are driven based on time that CYL_4 control is on.

Can pusher cylinder
control, on to push
can into and out of
rotator

CYL_4

O:2/3

TIE_TMR_4

TON

Timer On Delay

Timer T200:4

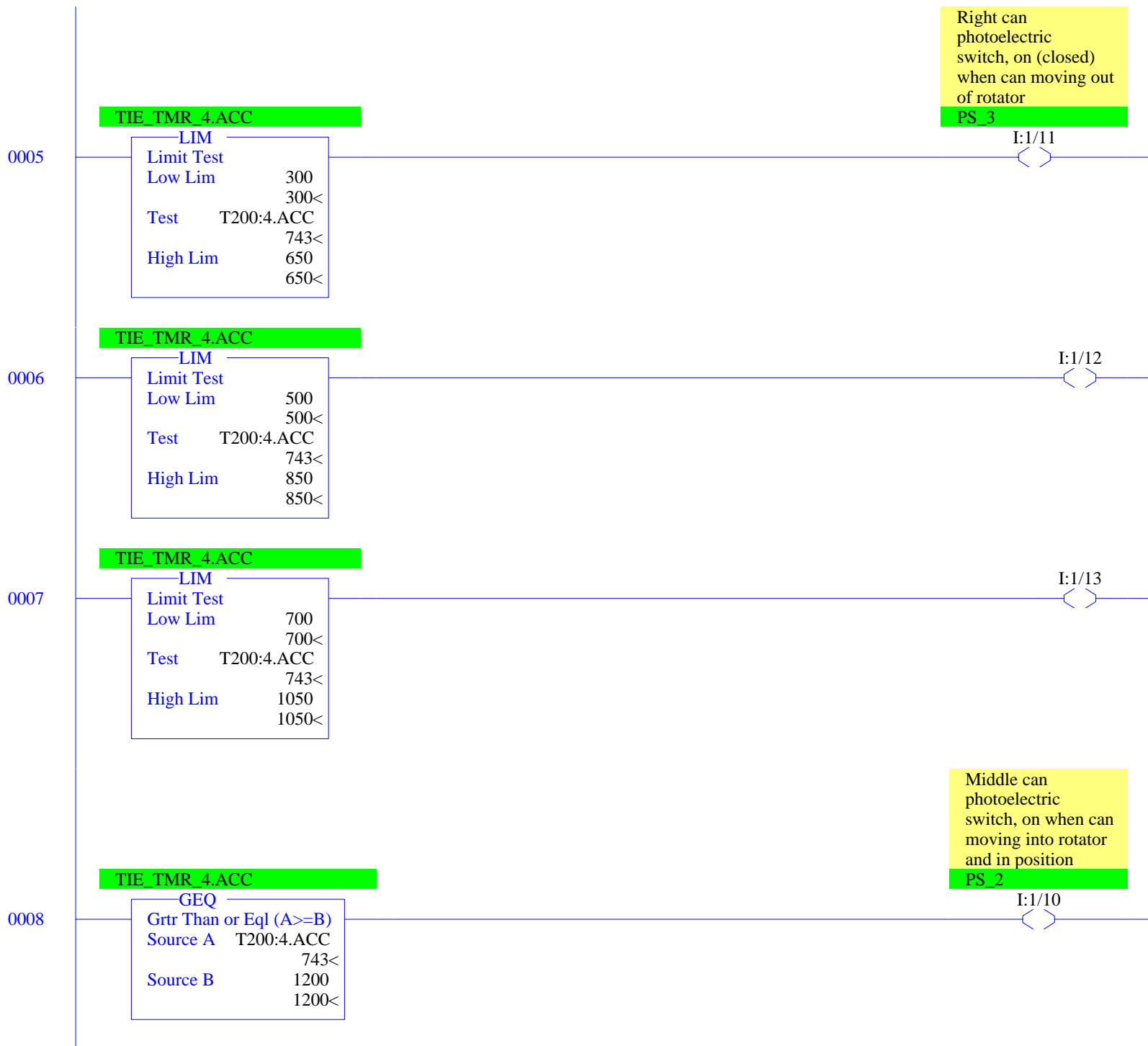
Time Base 0.01

Preset 20000<

Accum 743<

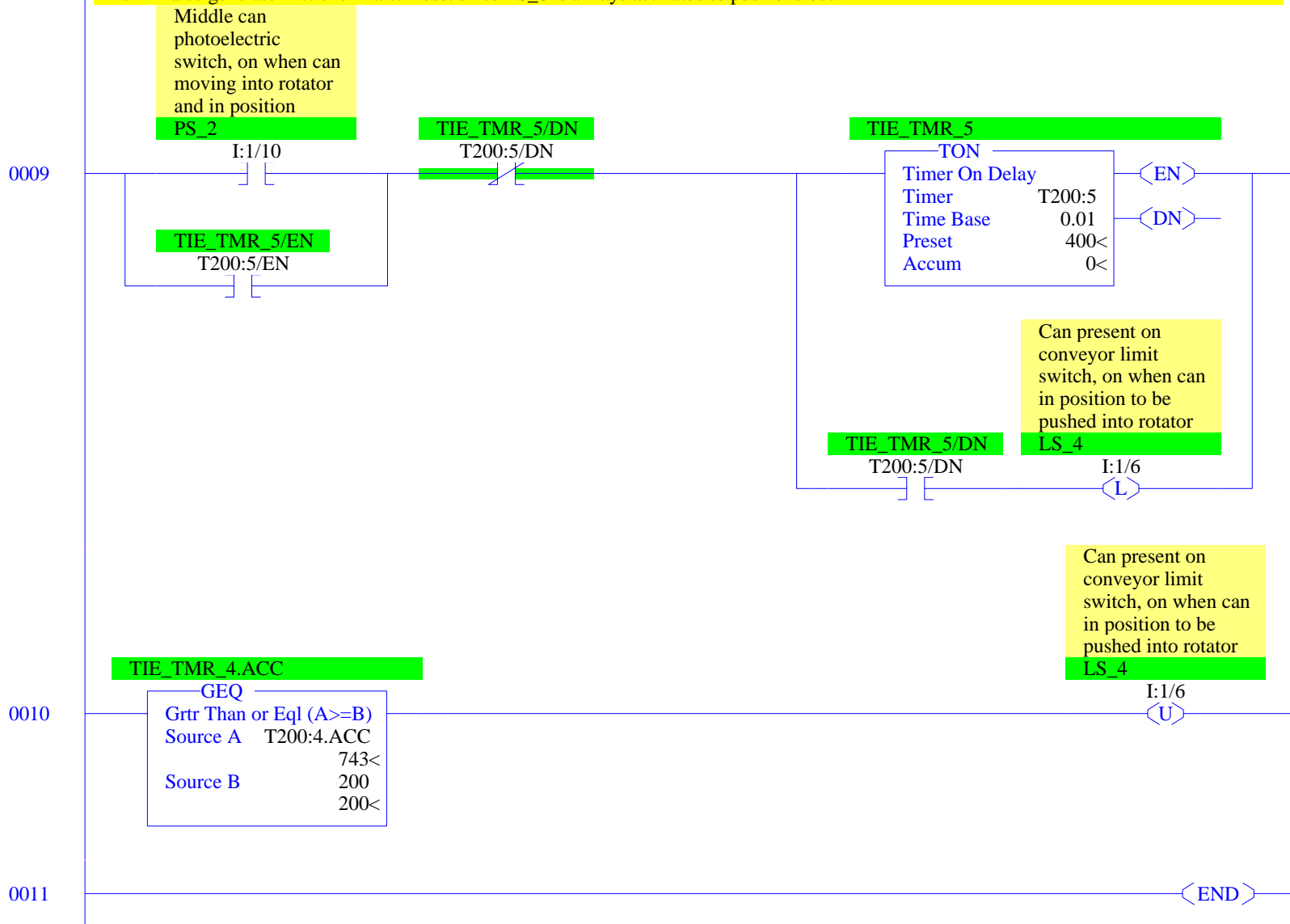
EN

DN



Simulate next one in 4 sec after LS_6 is activated.
Unlatch 2 seconds after CYL_4 activated.

This will also generate first one in after reset since LS_6 is always activated to push one out.



RSLogix 500 Cross Reference Report - Sorted by Address

O:2/0	- {CYL_1} Can holder cylinder control, on to clamp can into rotator OTE - File #2 - 12 XIC - File #100 TIEBACK - 2 XIO - File #100 TIEBACK - 3
O:2/1	- {CYL_2} Tipper cylinder control, on to tip rotator OTE - File #2 - 13 XIC - File #100 TIEBACK - 0 XIO - File #100 TIEBACK - 1
O:2/2	- {CYL_3} Gate cylinder control, on to extend and prevent next can from entering station OTE - File #2 - 14
O:2/3	- {CYL_4} Can pusher cylinder control, on to push can into and out of rotator OTE - File #2 - 15 XIC - File #100 TIEBACK - 4
O:2/4	- {MOTOR_1} Rotation motor control, on to rotate clamped can OTE - File #2 - 16
I:1/0	- {START_PB} Start push button, on when starting XIC - File #2 - 0
I:1/1	- {STOP_PB} Stop push button, off when stopping XIC - File #2 - 0
I:1/2	- {RESET_PB} Reset push button, on when restoring station to initial state XIC - File #2 - 11
I:1/3	- {LS_1} Horizontal position limit switch, on (closed) when rotator is in horizontal position OTE - File #100 TIEBACK - 0 XIC - File #2 - 6 XIO - File #2 - 2
I:1/4	- {LS_2} Holder clear limit switch, on (closed) when holder is clear of can OTE - File #100 TIEBACK - 3 XIC - File #2 - 2, 9, 15 XIO - File #2 - 11
I:1/5	- {LS_3} Holder down limit switch, on (closed) when can is being held in rotator OTE - File #100 TIEBACK - 2 XIC - File #2 - 5
I:1/6	- {LS_4} Can present on conveyor limit switch, on when can in position to be pushed into rotator OTL - File #100 TIEBACK - 9 OTU - File #100 TIEBACK - 10 XIC - File #2 - 2
I:1/7	- {LS_5} Vertical position limit switch, on (closed) when rotator in vertical position OTE - File #100 TIEBACK - 1 XIC - File #2 - 8, 15 XIO - File #2 - 11, 12
I:1/8	- {LS_6} CYL_4 fully extended limit switch, on when cylinder is fully extended, pushing can into rotator XIC - File #2 - 10 XIO - File #2 - 11, 15
I:1/9	- {PS_1} Left can photoelectric switch, on (closed) when can moving into rotator XIO - File #2 - 2, 3
I:1/10	- {PS_2} Middle can photoelectric switch, on when can moving into rotator and in position to be pushed into rotator OTE - File #100 TIEBACK - 8 XIC - File #2 - 3 File #100 TIEBACK - 9 XIO - File #2 - 2
I:1/11	- {PS_3} Right can photoelectric switch, on (closed) when can moving out of rotator OTE - File #100 TIEBACK - 5 XIO - File #2 - 2
I:1/12	- OTE - File #100 TIEBACK - 6
I:1/13	- OTE - File #100 TIEBACK - 7
B3/0	- {RUN} OTE - File #2 - 0 XIC - File #2 - 0, 1, 2, 4, 5, 6, 7, 8, 9, 15, 16 XIO - File #2 - 11
B3/1	- {INT_RESET} OTE - File #2 - 11 XIC - File #2 - 11, 12, 15 XIO - File #2 - 0
B3/200	- {ENAB_TIE_BACK} Enable tie-back simulation logic XIC - File #2 - 17
T4:0	- {RETRACT_TMR} Time retract of CYL -4

RSLogix 500 Cross Reference Report - Sorted by Address

	TON - File #2 - 4
T4:0/DN	- XIC - File #2 - 4
T4:1	- {BLEND_TMR} Blend timer, 60 sec
	RTO - File #2 - 7
	RES - File #2 - 7, 11
T4:1/DN	- XIC - File #2 - 7
B20/1	- {STEP_1}
	OTL - File #2 - 1, 10
	OTU - File #2 - 2, 11
	XIC - File #2 - 2
	XIO - File #2 - 1
B20/2	- {STEP_2}
	OTL - File #2 - 2
	OTU - File #2 - 3, 11
	XIC - File #2 - 3, 14, 15
	XIO - File #2 - 1
B20/3	- {STEP_3}
	OTL - File #2 - 3
	OTU - File #2 - 4, 11
	XIC - File #2 - 4, 14
	XIO - File #2 - 1
B20/4	- {STEP_4}
	OTL - File #2 - 4
	OTU - File #2 - 5, 11
	XIC - File #2 - 5, 12, 14
	XIO - File #2 - 1
B20/5	- {STEP_5}
	OTL - File #2 - 5
	OTU - File #2 - 6, 11
	XIC - File #2 - 6, 12, 13, 14
	XIO - File #2 - 1
B20/6	- {STEP_6}
	OTL - File #2 - 6
	OTU - File #2 - 7, 11
	XIC - File #2 - 7, 12, 13, 14, 16
	XIO - File #2 - 1
B20/7	- {STEP_7}
	OTL - File #2 - 7
	OTU - File #2 - 8, 11
	XIC - File #2 - 8, 12, 14
	XIO - File #2 - 1
B20/8	- {STEP_8}
	OTL - File #2 - 8
	OTU - File #2 - 9, 11
	XIC - File #2 - 9, 14
	XIO - File #2 - 1
B20/9	- {STEP_9}
	OTL - File #2 - 9
	OTU - File #2 - 10
	XIC - File #2 - 10, 14, 15
	XIO - File #2 - 1
T200:0	- {TIE_TMR_0}
	TON - File #100 TIEBACK - 0
T200:0/DN	- XIC - File #100 TIEBACK - 0
T200:1	- {TIE_TMR_1}
	TON - File #100 TIEBACK - 1
T200:1/DN	- XIC - File #100 TIEBACK - 1
T200:2	- {TIE_TMR_2}
	TON - File #100 TIEBACK - 2
T200:2/DN	- XIC - File #100 TIEBACK - 2
T200:3	- {TIE_TMR_3}
	TON - File #100 TIEBACK - 3
T200:3/DN	- XIC - File #100 TIEBACK - 3
T200:4	- {TIE_TMR_4}
	TON - File #100 TIEBACK - 4
T200:4.ACC	- GEQ - File #100 TIEBACK - 8, 10

RSLogix 500 Cross Reference Report - Sorted by Address

	LIM - File #100 TIEBACK - 5, 6, 7
T200:5	- {TIE_TMR_5}
	TON - File #100 TIEBACK - 9
T200:5/DN	- XIC - File #100 TIEBACK - 9
	XIO - File #100 TIEBACK - 9
T200:5/EN	- XIC - File #100 TIEBACK - 9
U:100	- JSR - File #2 - 17