












 Controller SP21_02 Controller Fault Handler Power-Up Handler**Tasks** MainTask MainProgram MainRoutine Simulation Simulation Unscheduled**Motion Groups** Ungrouped Axes**Add-On Instructions****Data Types** User-Defined Strings Add-On-Defined Module-Defined AB:1756_DI:C:0 AB:1756_DI:I:0 AB:1756_DO:C:0 AB:1756_DO:I:0 AB:1756_DO:O:0**Trends****I/O Configuration** 1756 Backplane, 1756-A10 [0] 1756-L71 SP21_02 [1] 1756-IB32/A discrete_in1 [2] 1756-IB32/A discrete_in_2 [3] 1756-IB32/A discrete_in3 [4] 1756-IB32/A discete_in_4 [5] 1756-OB32 DISCRETE_OUT5 [6] 1756-IB32/A DISCRETE_IN6 [7] 1756-OB32 DISCRETE_OUT7

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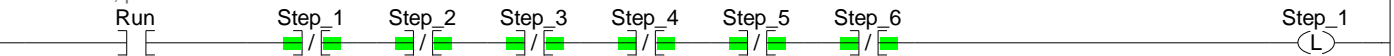
Case Erector Control - With Simulation

Additional internal memory:

Tag	Data Type	
Step_1 to Step_6	BOOL	Step-in-progress bits
Up_Tmr	TIMER	Times opening up
BDown_Tmr	TIMER	Times deactivate of bottom cylinder
Pulse_Cnt	COUNTER	Count encoder pulses

Initial start. When on, allow case erector to run. When off pause

When on, allow case
erector to run. When
off, pause



Step 1 Move in

Proximity sensor, on
when flat carton is
in position to be
erected

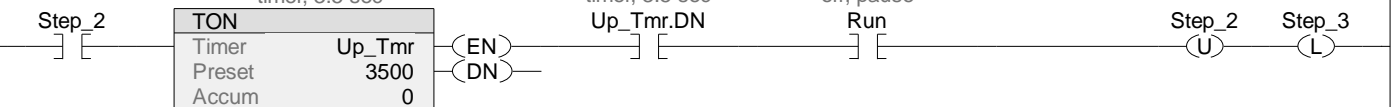


Step 2 Open up

Unfolding carton
timer, 3.5 sec

Unfolding carton
timer, 3.5 sec

When on, allow case
erector to run. When
off, pause

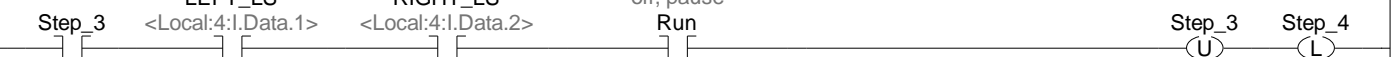


Step 3 Close sides

Limit switch, on
(closed) when left
flap is folded in
position

Limit switch, on
(closed) when right
flap is folded in
position

When on, allow case
erector to run. When
off, pause

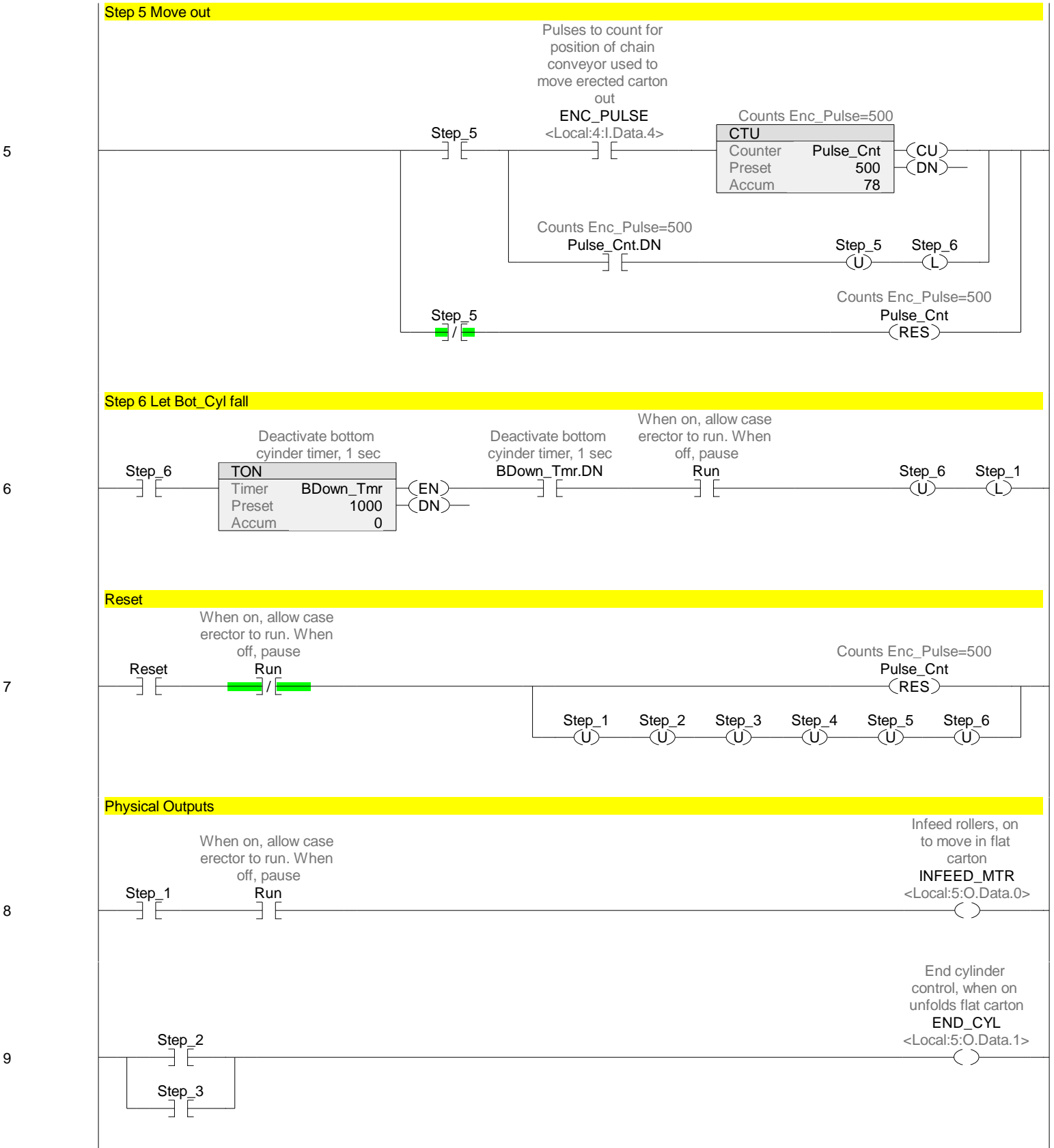


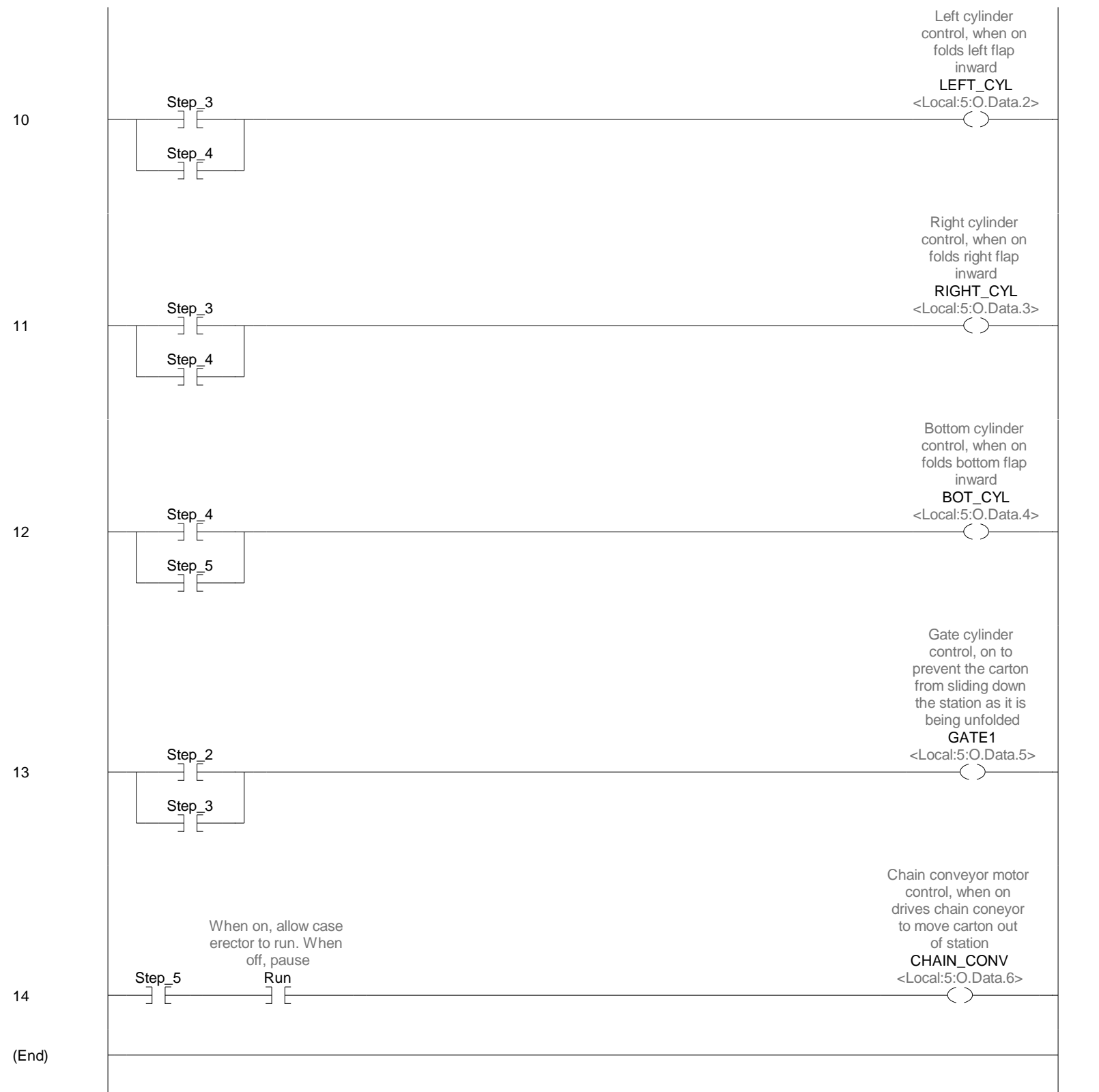
Step 4 Close bottom

Limit switch, on
(closed) when bottom
flap is in position

When on, allow case
erector to run. When
off, pause







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Case Erector simulation

On reset, unlatch PROX

Reset

Proximity sensor, on
when flat carton is
in position to be
erected
PROX
<Local:4:I.Data.0>
(U)

PROX simulation: Latch when INFEED running for 3 secs.
Unlatch when PROX on and CHAIN_CONV runs for one sec

Infeed rollers, on
to move in flat
carton
INFEED_MTR
<Local:5:O.Data.0>

TON	
Timer	Sim_Prox_On_Tmr
Preset	3000
Accum	0

Sim_Prox_On_Tmr.DN

Proximity sensor, on
when flat carton is
in position to be
erected
PROX
<Local:4:I.Data.0>
(L)

Proximity sensor, on
when flat carton is
in position to be
erected
PROX
<Local:4:I.Data.0>

Chain conveyor motor
control, when on
drives chain conveyer
to move carton out
of station
CHAIN_CONV
<Local:5:O.Data.6>

TON	
Timer	Sim_Prox_Off_Tmr
Preset	0
Accum	0

Sim_Prox_Off_Tmr.DN

Proximity sensor, on
when flat carton is
in position to be
erected
PROX
<Local:4:I.Data.0>
(U)

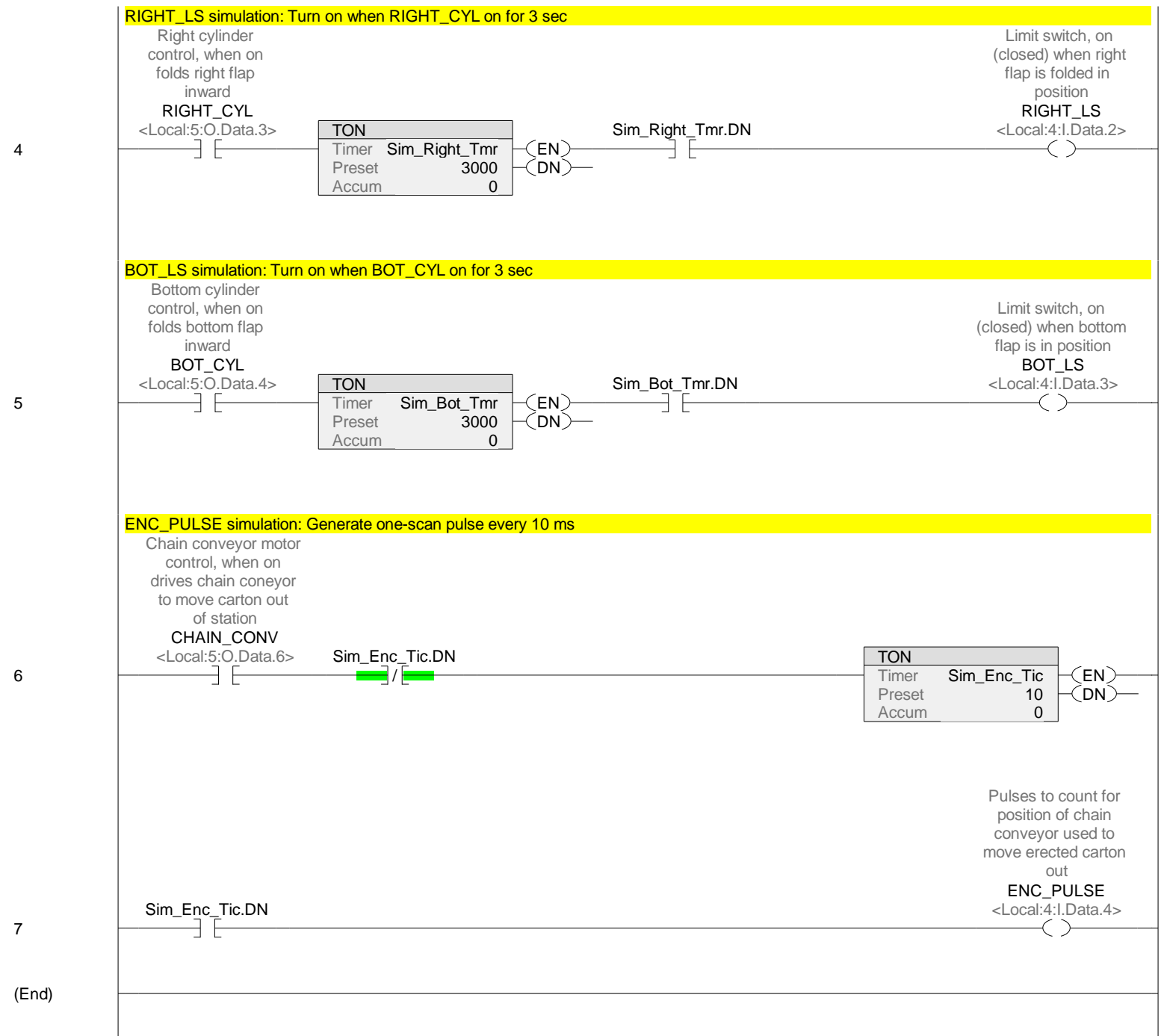
LEFT_LS simulation: Turn on when LEFT_CYL on for 3 sec

Left cylinder
control, when on
folds left flap
inward
LEFT_CYL
<Local:5:O.Data.2>

TON	
Timer	Sim_Left_Tmr
Preset	3000
Accum	0

Sim_Left_Tmr.DN

Limit switch, on
(closed) when left
flap is folded in
position
LEFT_LS
<Local:4:I.Data.1>
(C)



SP21_02	
Label does not exist	1
MainTask	
MainProgram	
MainRoutine	
Ladder Diagram	2
Simulation	
Simulation	
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