








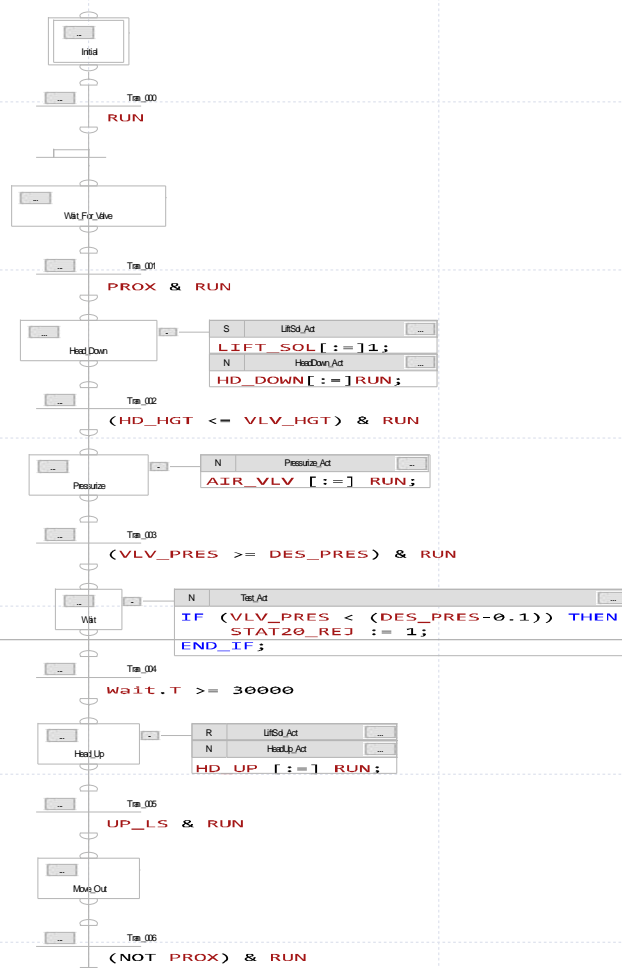
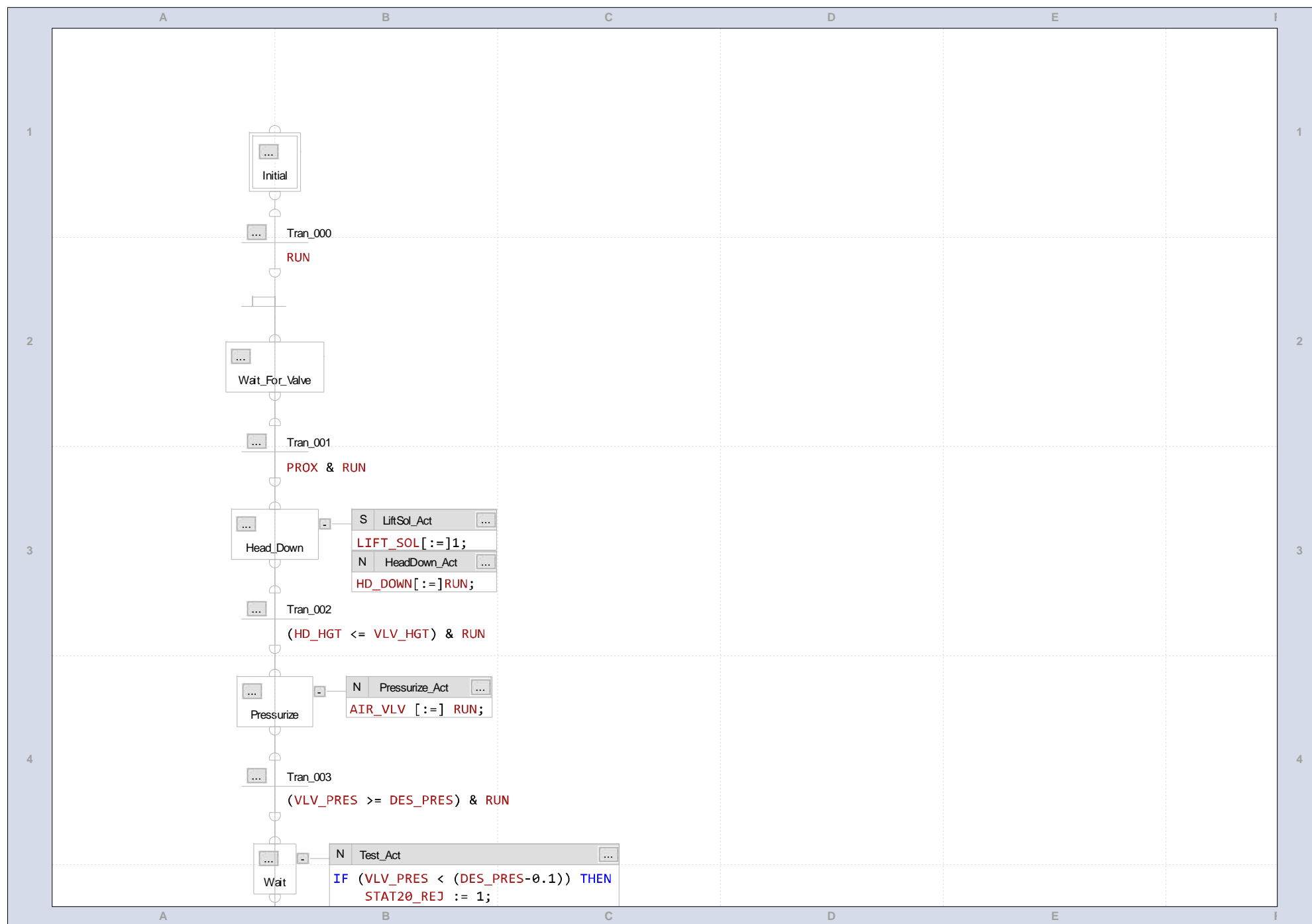
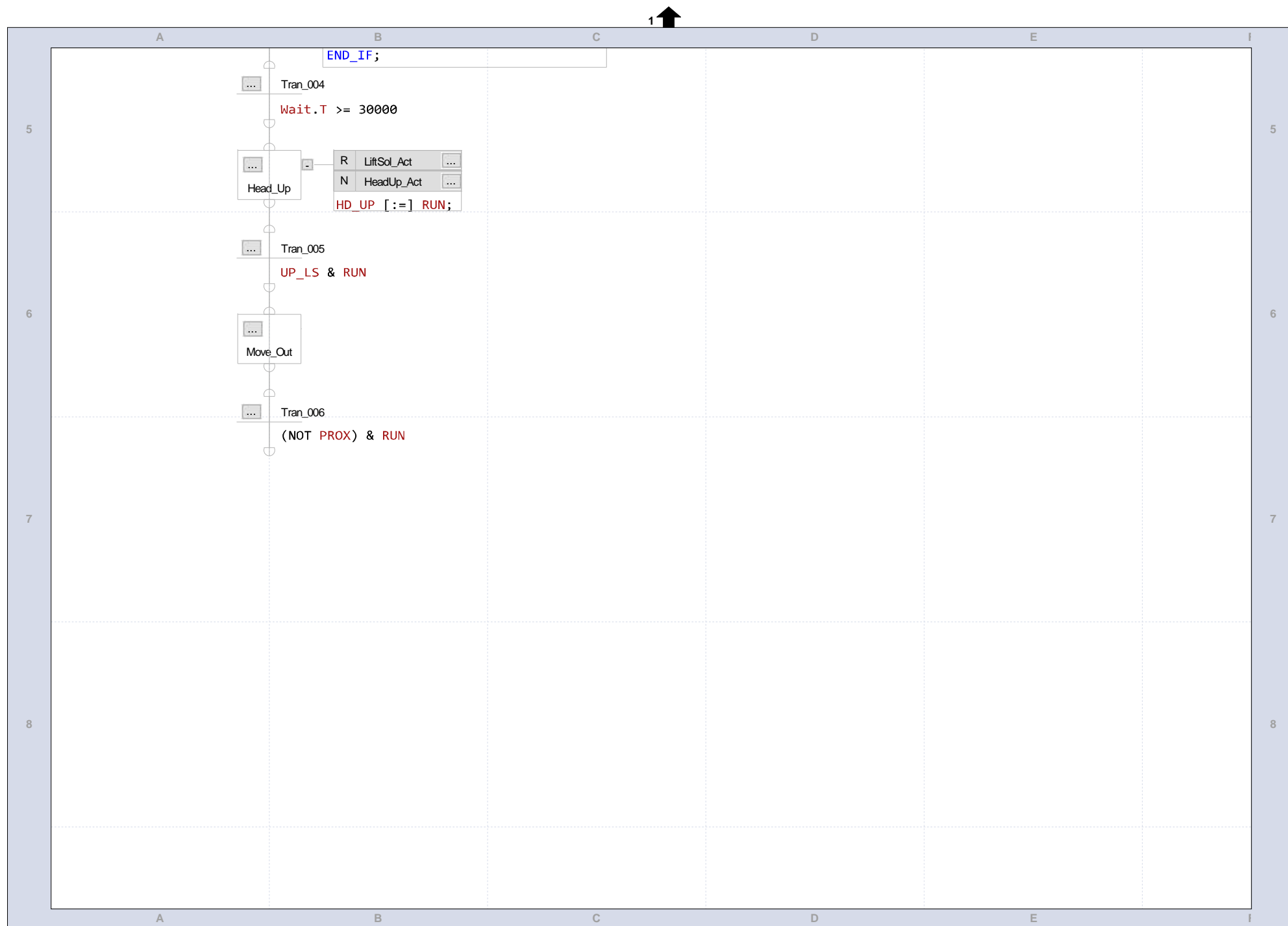


 Controller SP14_04 Controller Fault Handler Power-Up Handler**Tasks** MainTask MainProgram MainRoutine Leak_Check Reset_Actions Simulation Simulation Unscheduled**Motion Groups** Ungrouped Axes**Add-On Instructions****Data Types** User-Defined Strings Add-On-Defined Module-Defined AB:1756_DI:C:0 AB:1756_DI:I:0 AB:1756_DO:C:0 AB:1756_DO:I:0 AB:1756_DO:O:0 AB:1756_IF4_Float:C:0 AB:1756_IF4_Float:I:0 AB:1756_IF8_Integer:C:0 AB:1756_IF8_Integer:I:0 AB:1756_NII_Struct:C:0 AB:1756_OF4_Integer:C:0 AB:1756_OF4_Integer:I:0 AB:1756_OF4_Integer:O:0**Trends****I/O Configuration** 1756 Backplane, 1756-A10 [0] 1756-L71 SP14_04 [1] 1756-IB32/A discrete_in1 [2] 1756-OB32 DISCRETE_OUT2 [3] 1756-IF8 analo_in [4] 1756-OF4 [5] 1756-IB16 TW_discin







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***** Pressure Check Station Control Using SFC - With Simulation *****

Additional internal memory:

Tag Data Type
Int_Reset BOOL Internal reset

Conversion formulas

$HD_HGT = (HGT_MEAS/100) * (150-75) + 75$

$VLV_PRES = (PRES_MEAS/100) * (100-0) + 0$

Reset actions - Must be before rung driving Int_Reset

Reset in progress

Int_Reset

JSR

Routine Name Reset_Actions

Reset

Maintain until head is raised.

Reset to restore
station to initial
state.

RESET

When on, allow
pressure check
station to run. When
off, pause.

RUN

Wait.X

Limit switch that
closes (on) when
pressurizing head is
fully up

UP_LS

<Local:1:I.Data.1>

Reset in progress

Int_Reset

Reset in progress

Int_Reset

SFR

SFC Routine Name Leak_Check

Step Name Initial

Execute SFC

JSR

Routine Name Leak_Check

Calculate height of head.

Pressurizing head
height, in mm (REAL)

CPT

Dest HD_HGT

0.0

Expression $(HGT_MEAS/100.0)*(150-75)+75$

Calculate pressure in psi.

Pressure, in psi
(REAL)

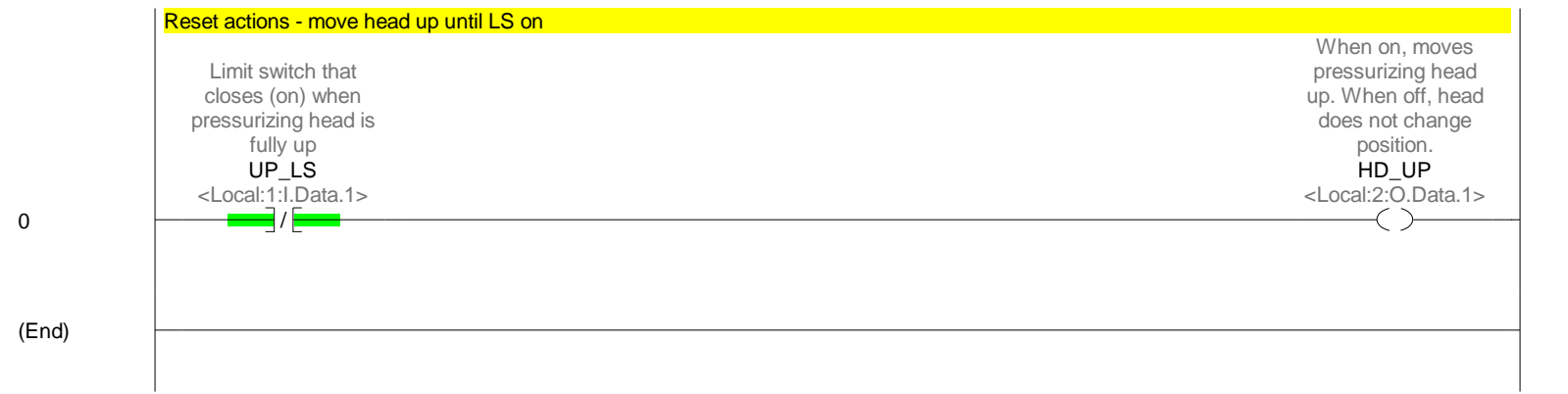
CPT

Dest VLV_PRES

0.0

Expression $(PRES_MEAS/100.0)*(100-0)+0$

(End)



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Pressure Check Station Simulation

When reset, forget there is anything in station

Reset to restore station to initial state.

RESET

Reflective proximity switch that is on when valve is in position to be pressure checked

PROX

<Local:1:I.Data.0>

(U)

Simulate next valve by delaying 6 secs after LIFT_SOL is off and running. Unlatch PROX 2 sec after LIFT_SOL is on.

On to move carrier and valve up and off the conveyor. When off valve and carrier fall.

LIFT_SOL

<Local:2:O.Data.2>

When on, allow pressure check station to run. When off, pause.

RUN

TON	
Timer	SimTmr1
Preset	6000
Accum	0

(EN)

(DN)

SimTmr1.DN

Reflective proximity switch that is on when valve is in position to be pressure checked

PROX

<Local:1:I.Data.0>

(L)

On to move carrier and valve up and off the conveyor. When off valve and carrier fall.

LIFT_SOL

<Local:2:O.Data.2>

TON	
Timer	SimTmr2
Preset	2000
Accum	0

(EN)

(DN)

SimTmr2.DN

Reflective proximity switch that is on when valve is in position to be pressure checked

PROX

<Local:1:I.Data.0>

(U)

Simulate head up limit switch.

When on, moves pressurizing head up. When off, head does not change position.

HD_UP

<Local:2:O.Data.1>

TON	
Timer	SimTmr3
Preset	3000
Accum	0

(EN)

(DN)

SimTmr3.DN

Limit switch that closes (on) when pressurizing head is fully up

UP_LS

<Local:1:I.Data.1>

(L)

When on, moves pressurizing head down. When off, head does not change position.

HD_DOWN

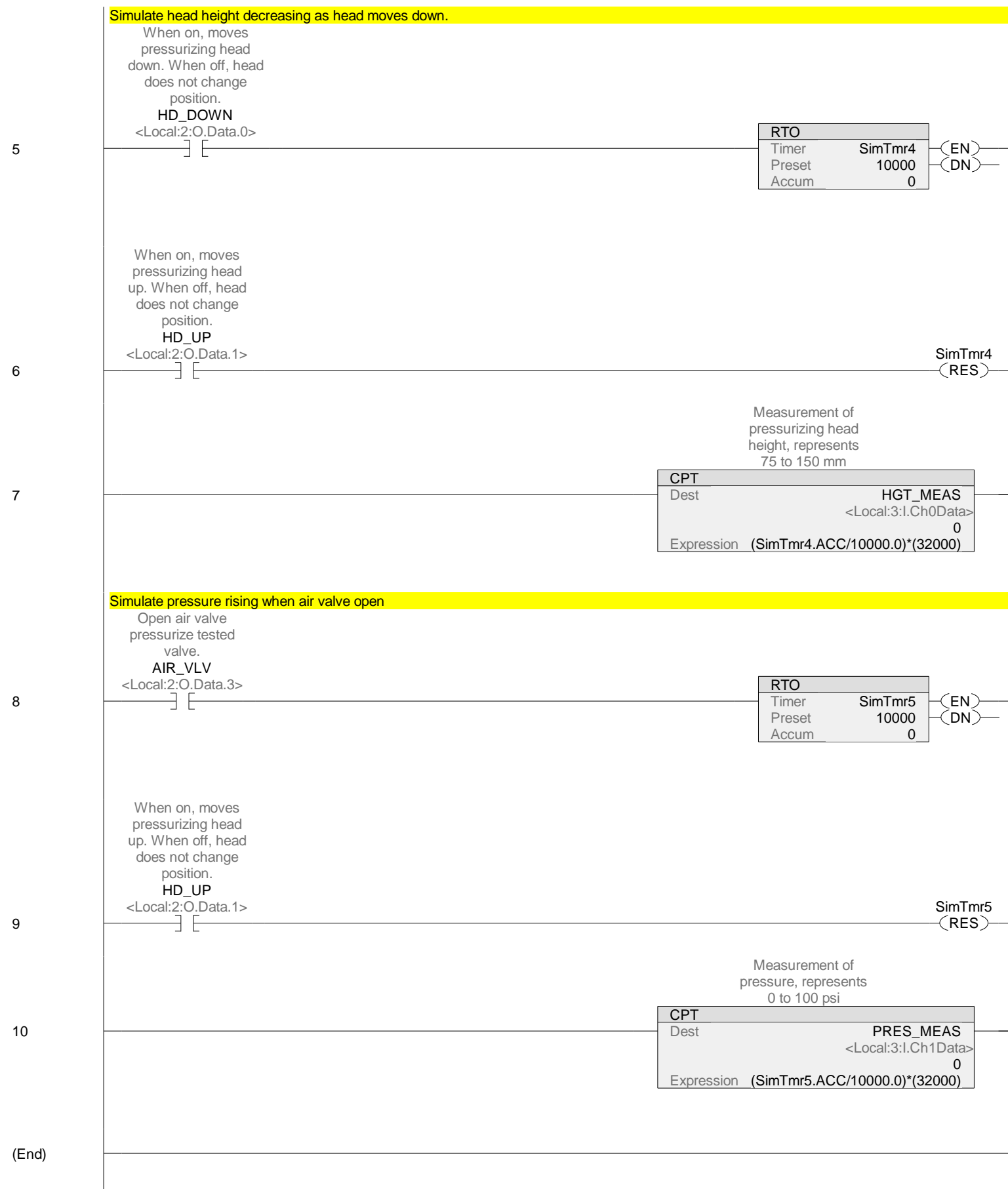
<Local:2:O.Data.0>

Limit switch that closes (on) when pressurizing head is fully up

UP_LS

<Local:1:I.Data.1>

(U)



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