






 Controller SP21_04 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 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 SP21_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 - With Simulation *****

Additional internal memory:

Tag	Data Type	
Int_Reset	BOOL	Internal reset
Step_1 to Step_6	BOOL	Step-in-progress bits
Wait_Tmr	TIMER	Times leak test

Conversion formulas

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

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

Initial start

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

0



Step 1. Wait for valve.

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

PROX

<Local:1:I.Data.0>

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

1



Step 2. Head down.

Pressurizing head
height, in mm (REAL)

LEQ

Source A	HD_HGT
	0.0
Source B	VLV_HGT
	0.0

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

2



Step 3. Pressurize.

Pressure, in psi
(REAL)

GEQ

Source A	VLV_PRES
	0.0
Source B	DES_PRES
	0.0

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

3



Step 4. Wait for pressure check.

Wait 30 sec to see
if valve leaks

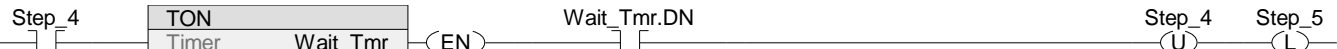
TON

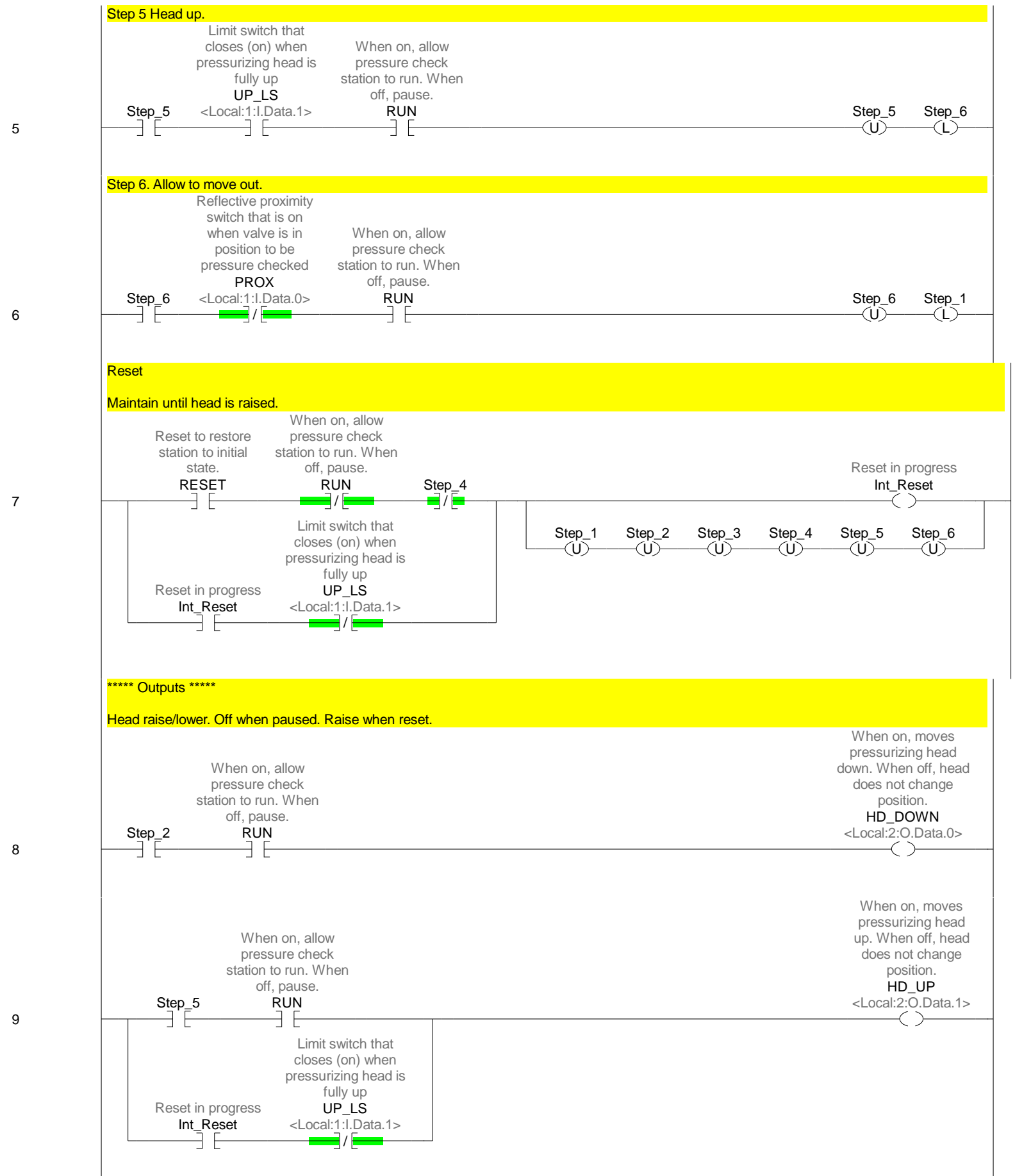
Timer	Wait_Tmr
Preset	30000
Accum	0

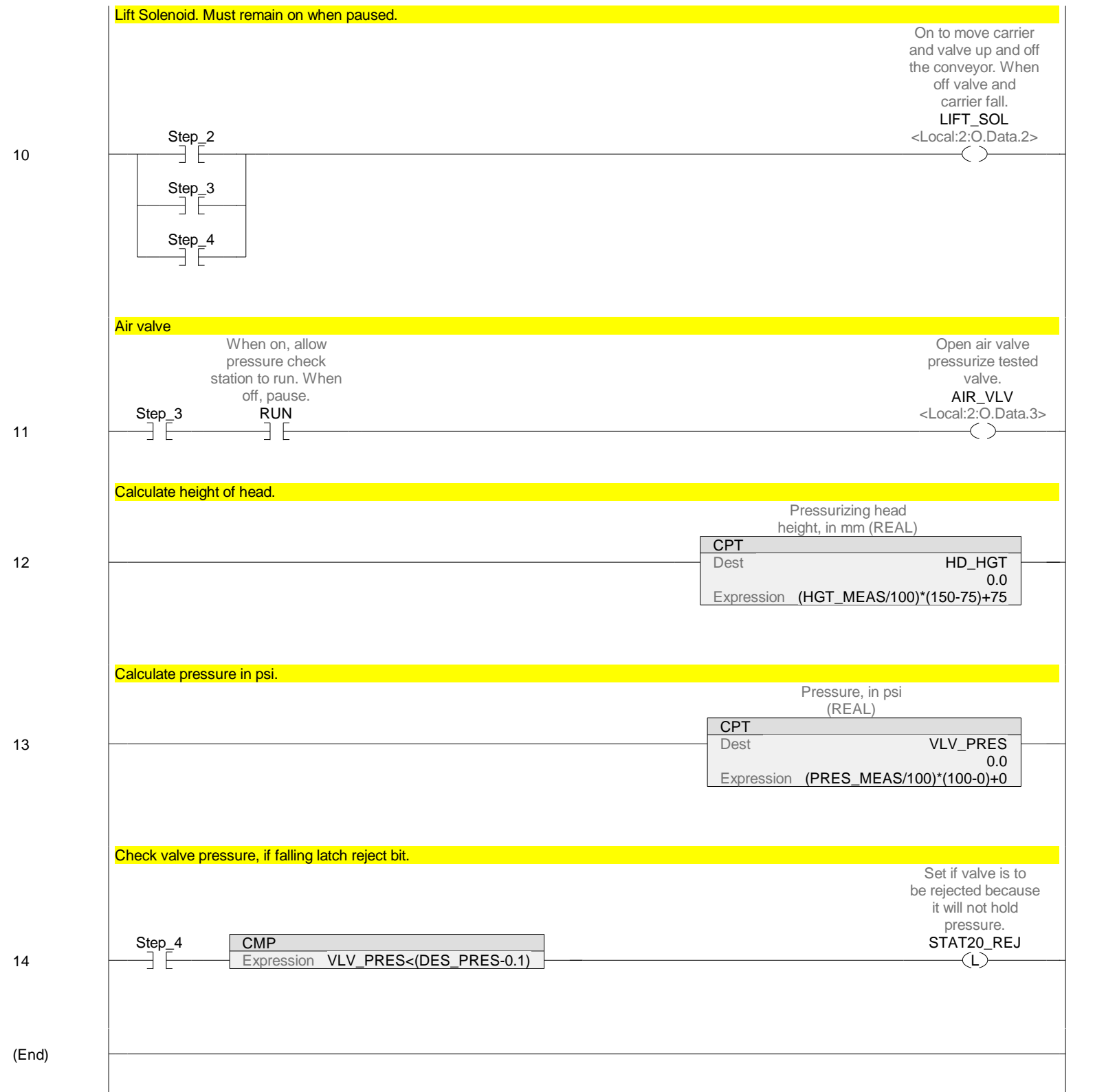
Wait 30 sec to see
if valve leaks

Wait_Tmr.DN

4







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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.

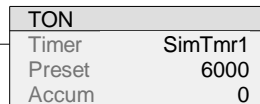
On to move carrier and valve up and off the conveyor. When off valve and carrier fall.

LIFT_SOL

<Local:2:O.Data.2>

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

RUN



(EN)

(DN)

SimTmr1.DN

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

PROX

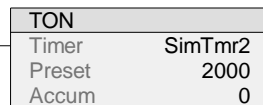
<Local:1:I.Data.0>

(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>



(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>

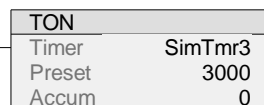
(U)

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>



(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

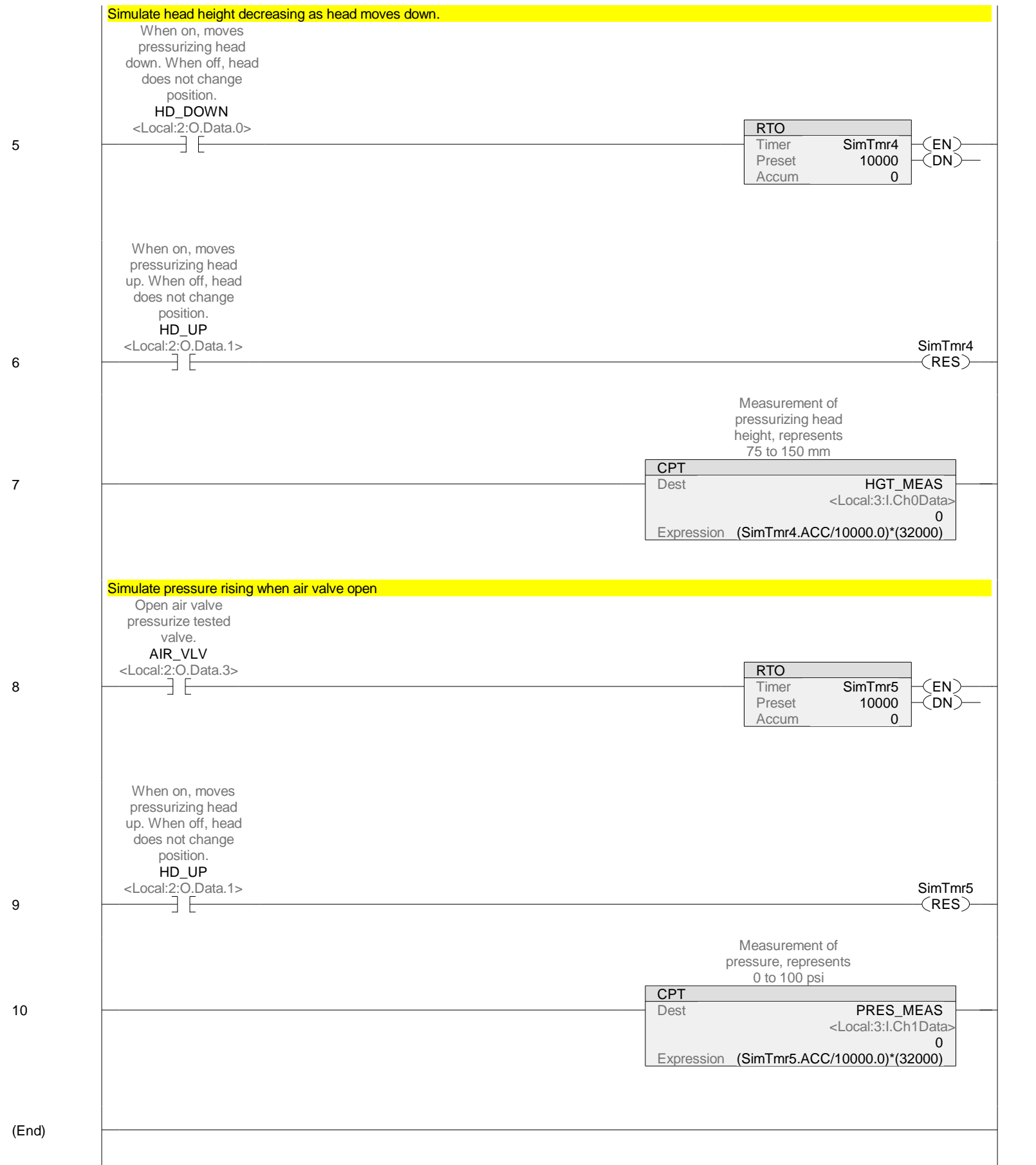
<Local:2:O.Data.0>

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

UP_LS

<Local:1:I.Data.1>

(U)



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