

## Example 7.5 - Operator Interface for Simple tank level control

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Convert level measurement into units of feet using CPT block - for SLC-5/03 or higher

Level of tank in  
feet

LT428\_VAL

CPT

Compute  
DestF8:20  
0.0<Expression  $(( (I:3.0 - 3277.0) * (15.0 - 1.0) ) | 13107.0) + 1.0$ 

## Control of Physical Outputs

Level of tank in  
feet

LT428\_VAL

Level of tank in  
feet

LT428\_VAL

Enables level  
control

T428\_CNTRL

Inlet valve control

XV427\_OPEN

LES

Less Than (A&lt;B)

Source A F8:20  
0.0<Source B F8:21  
0.0<

LEQ

Less Than or Eql (A&lt;=B)

Source A F8:20  
0.0<Source B F8:22  
0.0<

B3/121

O:2/0

Inlet valve control

XV427\_OPEN

O:2/0

0000

0001

0002

## Additional ladder logic for Example 7.5

Calculate level for operator display

Current level in  
tenths of feet for  
operator display  
LT428\_DISP

MUL  
Multiply  
Source A F8:20  
0.0<  
Source B 10.0  
10.0<  
Dest N7:10  
13106<

0003

Get minimum level from operator, convert to feet and calculate maximum level

Minimum tank level  
for control  
T428\_MIN

DIV  
Divide  
Source A N7:11  
16383<  
Source B 10.0  
10.0<  
Dest F8:21  
0.0<

Maximum tank level  
for control  
T428\_MAX

ADD  
Add  
Source A F8:21  
0.0<  
Source B 1.5  
1.5<  
Dest F8:22  
0.0<

0004

Low alarm lamp when level &lt; 4 feet

Level of tank in  
feet  
LT428\_VAL

Low alarm indication  
T428\_LOLA

B3/10

LES  
Less Than (A<B)  
Source A F8:20  
0.0<  
Source B 4.0  
4.0<

0005

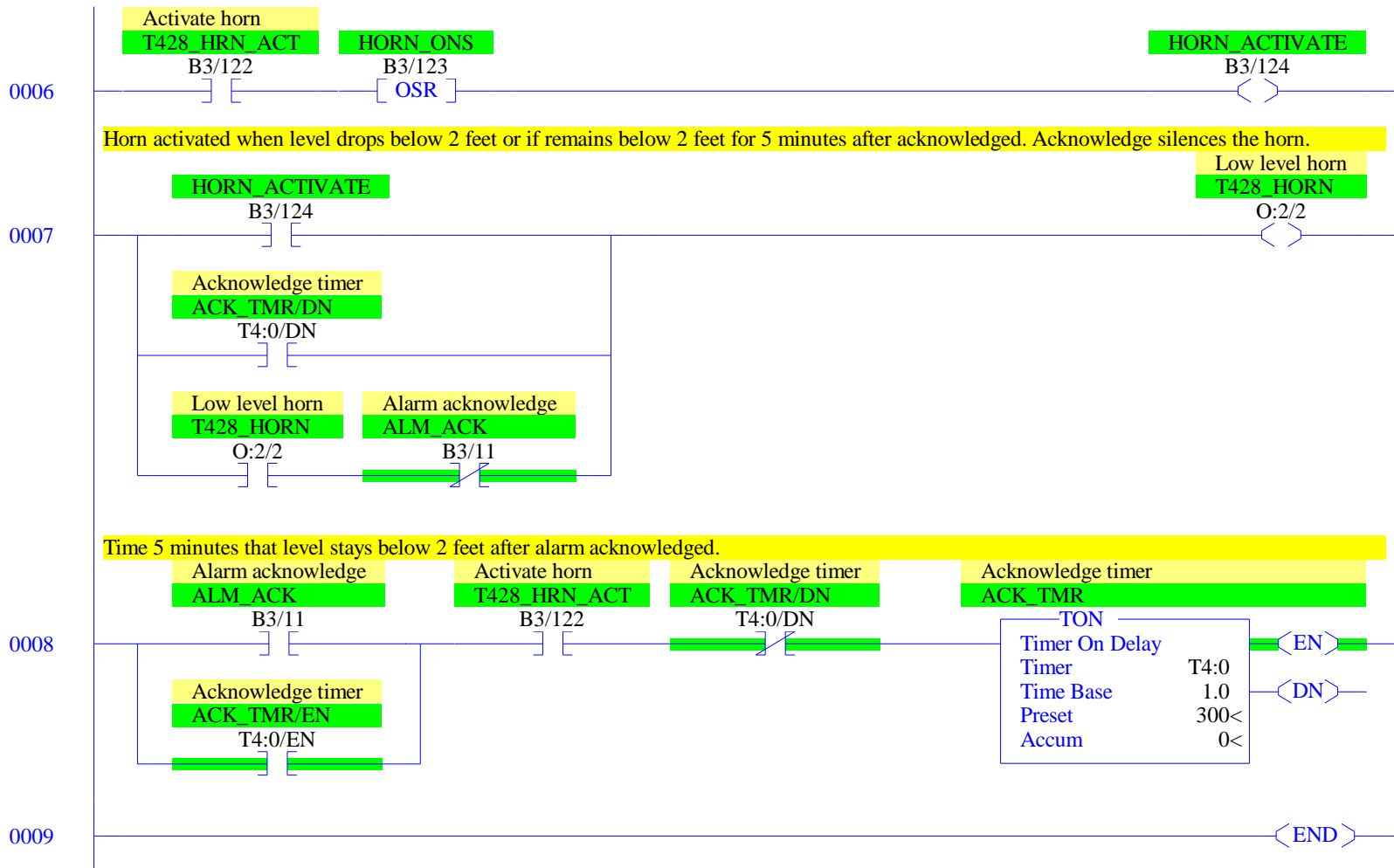
Level &lt; 2 activates horn

Level of tank in  
feet  
LT428\_VAL

Activate horn  
T428\_HRN\_ACT

B3/122

LES  
Less Than (A<B)  
Source A F8:20  
0.0<  
Source B 2.0  
2.0<



## RSLogix 500 Cross Reference Report - Sorted by Address

O:2/0	- {XV427_OPEN} Inlet valve control OTE - File #2 - 1 XIC - File #2 - 1
O:2/2	- {T428_HORN} Low level horn OTE - File #2 - 7 XIC - File #2 - 7
I:3.0	- {LT428_MEAS} Level measurement CPT - File #2 - 0
B3/10	- {T428_LOLA} Low alarm indication OTE - File #2 - 4
B3/11	- {ALM_ACK} Alarm acknowledge XIC - File #2 - 8 XIO - File #2 - 7
B3/121	- {T428_CNTRL} Enables level control XIC - File #2 - 1
B3/122	- {T428_HRN_ACT} Activate horn OTE - File #2 - 5 XIC - File #2 - 6, 8
B3/123	- {HORN_ONS} OSR - File #2 - 6
B3/124	- {HORN_ACTIVATE} OTE - File #2 - 6 XIC - File #2 - 7
T4:0	- {ACK_TMR} Acknowledge timer TON - File #2 - 8
T4:0/DN	- XIC - File #2 - 7 XIO - File #2 - 8
T4:0/EN	- XIC - File #2 - 8
N7:10	- {LT428_DISP} Current level in tenths of feet for operator display MUL - File #2 - 2
N7:11	- {LT428_MINDP} Minimum control in tenths of feet. From operator. DIV - File #2 - 3
F8:20	- {LT428_VAL} Level of tank in feet MUL - File #2 - 2 LES - File #2 - 1, 4, 5 LEQ - File #2 - 1 CPT - File #2 - 0
F8:21	- {T428_MIN} Minimum tank level for control ADD - File #2 - 3 DIV - File #2 - 3 LES - File #2 - 1
F8:22	- {T428_MAX} Maximum tank level for control ADD - File #2 - 3 LEQ - File #2 - 1