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1  (* Example 12.4  Operator interface and alarms for tank level control *)  
2  
3  (* Copyright (c) 2011 Dogwood Valley Press, LLC *)  
4
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5 FUNCTION_BLOCK LT428_OperIntf
6
7 VAR
8     TmpI      : INT;
9     HrnTrig   : R TRIG;
10    Ack_Tmr   : TON;
11    T428_Hrn_Act : BOOL;
12    HrnTrip    : BOOL;
13    Ack_Tmr_En : BOOL;
14 END_VAR
15
16 BEGIN
17     // Calculate level for operator display
18     LT428_DISP := REAL_TO_INT( LT428_VAL * 10.0);
19
20     // Read minimum level from operator display, convert to feet
21     T428_MIN := INT_TO_REAL( LT428_MINDP )/10.0;
22
23     // Calculate max level *
24     T428_MAX := T428_MIN + 1.5;
25     // Low level alarms *
26     T428_LOLA := (LT428_VAL < 4.0);
27     T428_Hrn_Act := (LT428_VAL < 2.0);
28     // Trigger horn when level drops below 2.0 or *
29     // stays below 2 for 5 minutes after ack'ed. *
30     HrnTrig(CLK:=T428_Hrn_Act);
31     IF ((HrnTrig.Q) OR (Ack_Tmr.Q)) THEN
32         T428_HORN := TRUE;
33     ELSE
34         IF HORN ACK THEN
35             T428_HORN := FALSE;
36         END_IF;
37     END_IF;
38     (* Time level staying below 2 after ack *)
39     IF (ALM_ACK AND T428_Hrn_Act) THEN
40         Ack_Tmr_En := TRUE;
41     END_IF;
42     IF Ack_Tmr_En AND (NOT T428_Hrn_Act OR Ack_Tmr.Q ) THEN
43         Ack_Tmr_En := FALSE;
44     END_IF;
45     Ack_Tmr( IN:=Ack_Tmr_En, PT:=T#5m);
46
47 END_FUNCTION_BLOCK
```