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1  PROGRAM Left_Exit_Station
2  VAR
3      Box_At_Left_Convey                : BOOL ;
4      Ons9_Left_Entry                   : R_TRIG ;
5      Ons10_Exit_Left                   : R_TRIG ;
6      Ons11_Re_Energize                  : F_TRIG ;
7      Ons12_Box_counter                  : R_TRIG ;
8  END_VAR
9
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1  (*
2  * File: Left Exit Conveyor
3  * Author: Jaime Calvente Mieres
4  * Date: 13-08-2022
5  * Description: Program to control the left exit path of the boxes.
6  *)
7
8
9  (*
10 * If the systme is active and sensor at left entry
11 * fires up, activate the conveyor and count one box.
12 * If the Exit sensor Negative edge detects a box,
13 * decrease the counter by one and check if conveyor
14 * needs to be stopped or not.
15 *)
16 IF System_Active THEN
17     // One shots
18     Ons9_Left_Entry ( CLK := At_Left_Entry ) ;
19     Ons10_Exit_Left ( CLK := At_Exit_Left ) ;
20     Ons12_Box_counter ( CLK := At_Left_Entry ) ;
21
22     // Convey Activation conditions
23     IF Ons11_Re_Energize . Q AND ( Left_Counter <> 0 OR At_Left_Entry ) OR
24     Ons9_Left_Entry . Q THEN
25         M_Left_Convey := TRUE ;
26     END_IF
27
28     // Set box at convy and increment counter
29     IF Ons12_Box_counter . Q THEN
30         //Box_At_Left_Convey := TRUE;
31         Left_Counter := Left_Counter + 1 ;
32         Left_Count := Left_Count + 1 ;
33     END_IF
34
35     // Counter decrement and Box at convey deactivation
36     IF Ons10_Exit_Left . Q THEN
37         //Box_At_Left_Convey := FALSE;
38         // Check the counter to decrease the counter
39         IF Left_Counter <> 0 THEN
40             Left_Counter := Left_Counter - 1 ;
41             // Check the counter to deactivate the Convey
42             ELSIF Left_Counter = 0 THEN
43                 M_Left_Convey := FALSE ;
44             END_IF
45         END_IF
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46     END_IF
47
48     (* Conditions to Re-Start the program after
49     a soft stop *)
50     Onsl1_Re_Energize ( CLK := Soft_Stop_Active ) ;
51     IF Soft_Stop_Active THEN
52         M_Left_Convey := FALSE ;
53     END_IF
54
```